CLAIM AMENDMENTS

1. (Currently Amended) A laser noise control system operating in conjunction with a laser driver, wherein the laser driver produces a laser drive signal that is provided to [so as to control] a laser so as to produce an optical signal, the laser noise control system comprising:

a beam splitter positioned to receive the optical signal and output a first portion and a second portion thereof;

an optical sensor positioned to receive [a] the first portion of [a light signal generated by the laser] the optical signal, the optical sensor thus capable of producing a sensor output signal indicative of the [laser beam generated by the laser] optical signal; and

a noise reduction feedback network operatively connected to the optical sensor and to the laser, the noise reduction feedback network configured to include a filter circuit [so as to produce] which receives the sensor output signal and produces a filtered noise reduction signal which is [provided to the laser for combination] combined with [a] the laser driver signal and [produced by the laser driver] provided to the laser.

2. (Previously Amended) The low noise laser control system of claim 1 further comprising a LF control loop operatively attached between the optical sensor and the laser driver to provide CW control of the laser.

3. (Original) The low noise laser control system of claim 2 further comprising a trans-impedance amplifier attached to an output of the optical sensor, the trans-impedance amplifier producing an amplified signal proportional to the optical sensor signal and providing the amplified signal to both the LF control loop and the noise reduction feedback network.

4. (Original) The low noise laser control system of claim 1 wherein the noise reduction feedback network is a series RCL circuit.

5. (Original) The low noise laser control system of claim 4 wherein the RCL circuit is configured to provide a band-pass function.

6. (Original) The low noise laser control system of claim 1 wherein the noise reduction feedback network is a high-pass transistor amplifier network.

7. (Previously Amended) The low noise laser control system of claim 3 wherein the LF control loop includes a processor attached to the trans-impedance amplifier, the processor further having an output attached to the laser driver, the processor output carrying a LF control signal which allows the laser driver to provide appropriate levels of current to operate the laser at a desired CW level.

8. (Original) The low noise laser control system of claim 7 wherein the noise reduction feedback network is a series RCL circuit.

9. (Original) The low noise laser control system of claim 7 wherein the noise reduction feedback network is a high-pass transistor amplifier network.

10. (Previously Amended) The low noise laser control system of claim 3 wherein the LF control loop includes an amplifier network attached to the output of the trans-impedance amplifier, the amplifier having an output attached to the laser driver, the amplifier output carrying a LF control signal which allows the laser driver to provide appropriate levels of current to operate the laser at a desired CW level.

11. (Original) The low noise laser control system of claim 1 further comprising a control switch to selectively operate the noise reduction feedback network.

12. (Currently Amended) A [low noise] laser noise control system for use in controlling a laser within a data storage drive, comprising:

a beam splitter positioned to receive a laser beam produced by the laser and direct a portion of the laser beam in a predetermined direction;

an optical sensor positioned to receive the portion of the laser beam from the beam splitter and to [associated with the laser to] produce a sensor output signal

indicative of the laser beam [being produced by the laser and directed toward a storage media];

an amplifier attached to an output of the optical sensor for producing an amplified signal which is inverted with respect to the sensor output signal;

a noise reduction feedback network having a circuit connection between the amplifier and the laser in order to receive the amplified signal and to provide a filtered noise signal to the laser, wherein the filtered noise signal will cancel noise present [on] in the laser beam.

13. (Original) The control system of claim 12 wherein the noise reduction feedback network is a high pass high impedance network.

14. (Original) The control system of claim 12 wherein the noise reduction feedback network comprises a resistor, a capacitor, and an inductor all connected in series with one another.

15. (Original) The control system of claim 12 wherein the noise reduction feedback network comprises a transistor amplifier.

16. (Original) The control system of claim 12 wherein the optical sensor is a fast forward sense detector.

17. (Original) The low noise laser control system of claim 12 further comprising a control switch to selectively operate the noise reduction feedback network.

18 (Currently Amended) The control system of claim 12 wherein the noise reduction feedback network further comprises a disabling switch for [tuning] selectively disabling the feedback network.

19. (Original) The control system of claim 18 wherein the feedback network is disabled during writing operations of the data storage drive.

20. (Currently Amended) A laser control system attached to the read/write laser of an optical data storage system which is directed toward a data storage medium, the control system comprising:

a laser driver attached to the laser for providing a laser drive signal which controls the operation of the laser;

a beam splitter positioned to receive a laser signal from the laser and redirect at least a portion thereof;

an optical sensor positioned [coupled to the laser] to receive the [a] portion of the laser signal redirected [produced] by the beam splitter [laser] and provide a sensor output proportional to the [power of the] laser signal;

an amplifier attached to the optical sensor for producing an amplified signal, the amplified signal being inverted and amplified when compared with the sensor output;

a processor attached to the amplifier and the laser driver, the processor receiving the amplified signal and producing a laser control signal to control the intensity level of the laser; and

a noise reduction feedback network having a circuit connection between the output of the amplifier and the laser, the noise reduction feedback network receiving the amplified signal and providing a cancellation signal to the laser in order to reduce the noise in the laser signal directed to the optical medium.

21. (Original) The laser control system of claim 20 further comprising a switch operatively connected to the noise reduction feedback network to provide for selective generation of the cancellation signal.

22. (Original) The laser control system of claim 20 wherein the noise reduction feedback network is a high pass and high impedance network.

23. (Original) The laser control system of claim 20 wherein the noise reduction feedback network comprises a resistor, a capacitor, and an inductor all connected in series with one another.

24. (Original) The laser control system of claim 23 wherein the resistor, capacitor and inductor are configured to provide a band-pass function.

25. (Original) The laser control system of claim 20 wherein the noise reduction feedback network comprises a transistor amplifier.

26. (Original) The laser control system of claim 20 wherein the optical sensor is a fast forward sense detector.

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27. (Currently Amended) A laser control system for operating a laser, comprising:

a beam splitter for receiving an optical signal produced by the laser and outputting a portion thereof;

an optical sensor positioned to receive the [a] portion of [an] optical signal output [produced] by the beam splitter [laser], the optical sensor thus producing a sensor signal responsive to the optical signal; and

noise reduction means for receiving the sensor signal from the optical sensor and producing a noise reduction signal which is then provided to the laser to cancel noise present in the laser.

28. (Previously Added) The laser control system of claim 27 wherein the noise reduction means is a feedback network.

29. (Previously Added) The low noise laser control system of claim 27 further comprising a LF control means operatively attached between the laser and the optical sensor to provide CW control of the laser.

30. (Previously Added) The low noise laser control system of claim 29 further comprising a trans-impedance amplifier attached to an output of the optical sensor, the trans-impedance amplifier producing an amplified signal proportional to the optical sensor signal and providing the amplified signal to both the LF control means and the noise reduction means.

31. (Previously Added) The low noise laser control system of claim 29 wherein the noise reduction means is a band pass filter.

32. (Currently Amended) A laser noise reduction system for use in conjunction with a laser which is driven by a laser driver so as to produce an optical signal, the laser noise reduction system comprising:

a beam splitter positioned to receive the optical signal and output a first portion and a second portion thereof;

an optical sensor positioned to receive [a] the first portion of the optical signal [laser beam generated by the laser] and to produce a sensor output signal indicative of the laser beam;

a noise reduction feedback circuit having an input connected to the optical sensor so as to receive the sensor output signal and an output connected to the laser, the noise reduction feedback circuit having filtering circuitry and inversion circuitry which receives the sensor output signal and produces [such that] a noise reduction signal [is generated] at the output which is an inverted and filtered version of the sensor signal.

33. (Previously Added) The laser noise reduction system of claim 32 wherein the noise reduction feedback circuit is a series RCL circuit.

34. (Previously Added) The low noise laser control system of claim 32 wherein the RCL circuit is configured to provide a band-pass function.

35. (Previously Added) The low noise laser control system of claim 32 wherein the noise reduction feedback network is a high-pass transistor amplifier network.

36. (Previously Added) The low noise laser control system of claim 32 further including an LF control loop including a processor attached to a trans-impedance amplifier, the processor further having an output attached to the laser driver, the processor output carrying a LF control signal which allows the laser driver to provide appropriate levels of current to operate the laser at a desired CW level.

37. (Previously Added) The low noise laser control system of claim 36 wherein the noise reduction feedback circuit is a series RCL circuit.

38. (Previously Added) The low noise laser control system of claim 36 wherein the noise reduction feedback circuit is a high-pass transistor amplifier network.

39. (Previously Added) The low noise laser control system of claim 32 further comprising a control switch to selectively operate the noise reduction feedback network.